Worksheet #1

Name: _____ **Period:** _____ **Seat#:** _____

Directions: Indicate the # of **VALENCE** electrons for each species. Write the correct Lewis electron-dot structure for each. Note the shape of the molecule (for compounds only). Don't forget to adjust the number of electrons for ions and to include square brackets and charges for ions.

F # of valence e⁻'s = _____	**O** # of valence e⁻'s = _____	**K** # of valence e⁻'s = _____	**Al** # of valence e⁻'s = _____
F⁻ # of valence e⁻'s = _____	**O²⁻** # of valence e⁻'s = _____	**K⁺** # of valence e⁻'s = _____	**Al³⁺** # of valence e⁻'s = _____
F₂ # of valence e⁻'s = _____ Shape:	**H₂** # of valence e⁻'s = _____ Shape:	**HF** # of valence e⁻'s = _____ Shape:	**NH₃** # of valence e⁻'s = _____ Shape:
CH₄ # of valence e⁻'s = _____ Shape:	**NF₃** # of valence e⁻'s = _____ Shape:	**SiF₄** # of valence e⁻'s = _____ Shape:	**C₂H₆ *** # of valence e⁻'s = _____ *Shape:
MgH₂ *(ionic)*** # of valence e⁻'s = _____	**LiH** *(ionic)*** # of valence e⁻'s = _____	**AlH₃** *(covalent)* # of valence e⁻'s = _____ Shape:	**BH₃** *(covalent)* # of valence e⁻'s = _____ Shape:

*Just pick one of the carbons to be "center" and then figure out the geometry based on that one.
**These are weird, they exhibit both ionic and covalent character. Just draw them as ionic for some extra ionic practice.

C_2H_4 * # of valence e⁻'s = _____	C_2F_4 * # of valence e⁻'s = _____	CO # of valence e⁻'s = _____	O_2 # of valence e⁻'s = _____
Shape:	Shape:	Shape:	Shape:
CO_2 # of valence e⁻'s = _____	C_2H_2 * # of valence e⁻'s = _____	N_2 # of valence e⁻'s = _____	HCN # of valence e⁻'s = _____
Shape:	Shape:	Shape:	Shape:
CN^- # of valence e⁻'s = _____	SO_4^{2-} # of valence e⁻'s = _____	PO_4^{3-} # of valence e⁻'s = _____	ClO_3^- # of valence e⁻'s = _____
Shape:	Shape:	Shape:	Shape:
CO_3^{2-} # of valence e⁻'s = _____	NO_3^- # of valence e⁻'s = _____	SO_2 # of valence e⁻'s = _____	O_3 # of valence e⁻'s = _____
Shape:	Shape:	Shape:	Shape:
SF_6 # of valence e⁻'s = _____	XeF_4 # of valence e⁻'s = _____	PCl_5 # of valence e⁻'s = _____	SeF_4 # of valence e⁻'s = _____
Shape:	Shape:	Shape:	Shape: